

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (canceled)

1 Claim 2 (currently amended): A loosening-proof nut
2 comprising a nut body having a central female thread with
3 a nominal diameter d , the nut body having an upper
4 portion and a lower portion, wherein the maximum outer
5 diameter of the upper portion is less than the minimum
6 outer diameter of the lower portion, the nut body also
7 having two slits formed such as to be symmetrical with
8 respect to the axis of the nut, the two slits radially
9 penetrate the female thread from the outer periphery of
10 the nut, said slits are located in the upper portion of
11 the nut body and are located at the same position in an
12 axial direction of the nut body and located at an axial
13 position on an upper side of an axial center position of
14 the nut body, the slits defining push parts, which ~~are~~
15 have been bent downward resulting in plastic deformation,
16 the slits consist of a first and a second slit
17 symmetrical with respect to the axis of the nut such that
18 all cuts are at a single axial position and the remaining
19 upper portion is substantially solid outside of the
20 female threaded portion, the push parts consist of a
21 first and a second push part defined in the upper portion
22 of the nut body by the first and second slit.

1 Claim 3 (previously presented): The loosening-proof nut
2 according to claim 2, wherein the nut body has a height
3 h , a bottom width g of first and second slits, and a
4 thickness of first and second push parts a , the height h

5 is at least 0.5 times the nominal diameter d , the bottom
6 width g of the first and second slits is 0.05 to 0.2
7 times the nominal diameter d , the thickness a of the
8 first and second push parts is 0.1 to 0.3 times the
9 nominal diameter d .

1 Claim 4 (previously presented): The loosening-proof nut
2 according to claim 2, wherein a width s defines slit gap
3 at the tips of the first and second push parts, the width
4 s is in a range of 0 to 0.5 times a bottom width g of the
5 first and second slits.

1 Claim 5 (previously presented): The loosening-proof nut
2 according claim 2, wherein the first and second slits are
3 at an angle between 70 and 90 degrees with respect to the
4 axis of the nut body and are formed substantially
5 symmetrically with respect to the axis of the central
6 female thread.

1 Claim 6 (previously presented): The loosening-proof nut
2 according to claim 2, wherein the upper portion of the
3 nut body inclusive of the first and second push parts is
4 circular in plan view shape.

1 Claim 7 (currently amended): A polygon shaped nut having
2 an internal female thread, a first opening from which a
3 male thread to be screwed is inserted, and a second
4 opening, from which the inserted male thread gets out;
5 wherein the nut comprises at least two pairs of slits
6 formed at an axial position closer to the second opening
7 and such as to be symmetrical with respect to the axis of
8 the nut and to radially partly penetrate the female

9 thread from the outer periphery of the nut, a first axial
10 part defined on the first opening side and a second axial
11 part defined on the second opening side bounded by the
12 pairs of slits, and the female thread parts of the first
13 and second axial parts have the same shape parameter, and
14 the direction of the surface, in which the female thread
15 part in the second axial part is formed, is deviated from
16 the axial direction as a result of plastic deformation
17 due to pressure that had been exerted on the nut, and
18 wherein each slit of said at least two pairs of
19 slits has two endpoints on the outer periphery of the
20 nut, and
21 wherein each of said endpoints is at the same axial
22 position.

1 Claim 8 (currently amended): A nut having an internal
2 female thread, a first opening from which a male thread
3 to be screwed is inserted, and a second opening, from
4 which the inserted male thread gets out; wherein the nut
5 comprises at least a pair of slits formed at the same
6 position in an axial direction of the nut body and formed
7 at an axial position closer to the second opening and
8 such as to be symmetrical with respect to the axis of the
9 nut and to radially partly penetrate the female thread
10 from the outer periphery of the nut, a first axial part
11 defined on the first opening side and a second axial part
12 defined on the second opening side bounded by the pair of
13 slits, and the female thread parts of the first and
14 second axial parts have the same shape parameter, and the
15 direction of the surface, in which the female thread part
16 in the second axial part is formed, is deviated from the
17 axial direction as a result of plastic deformation of the

18 second axial part due to pressure that had been exerted
19 on the nut, wherein the second axial part and slits are
20 included in a second portion of the nut having a smaller
21 maximum outside diameter than a minimum outside diameter
22 of a first portion of the nut, said first portion of the
23 nut being formed to accept a tool used for tightening and
24 loosening the nut, and
25 wherein all cuts are at a single axial position and
26 the remaining second portion of the nut is substantially
27 solid outside the female threaded portion.

1 Claim 9 (currently amended): A polygon shaped nut having
2 an internal female thread, a first opening from which a
3 male thread to be screwed is inserted, and a second
4 opening, from which the inserted male thread gets out;
5 wherein the nut comprises at least two pairs of slits
6 formed at an axial position closer to the second opening
7 and such as to be symmetrical with respect to the axis of
8 the nut and to radially partly penetrate the female
9 thread from the outer periphery of the nut, a first axial
10 part defined on the first opening side and a second axial
11 part defined on the second opening side bounded by the
12 pairs of slits, and the female thread parts of the first
13 and second axial parts have the same shape parameter, and
14 the width of the slit increases as moving from the outer
15 periphery toward axis of the nut in the axial direction,
16 said second axial part being plastically deformed, said
17 variation in slit width caused by plastic deformation of
18 the second axial part, and
19 wherein each slit of said at least two pairs of
20 slits has two endpoints on the outer periphery of the
21 nut, and

22 wherein each of said endpoints is at the same axial
23 position.

1 Claim 10 (currently amended): A nut having an internal
2 female thread, a first opening from which a male thread
3 to be screwed is inserted, and a second opening, from
4 which the inserted male thread gets out; wherein the nut
5 comprises at least a pair of slits formed at the same
6 position in the axial direction of the nut body and
7 formed at an axial position closer to the second opening
8 and such as to be symmetrical with respect to the axis of
9 the nut and to radially partly penetrate the female
10 thread from the outer periphery of the nut, a first axial
11 part defined on the first opening side and a second axial
12 part defined on the second opening side bounded by the
13 pair of slits, the female thread parts of the first and
14 second axial parts have the same shape parameter, and the
15 direction of the surface, in which the female thread part
16 in the second axial part is formed, is deviated from the
17 axial direction, and the maximum outer diameter of the
18 second axial part is smaller than the minimum outer
19 diameter of the first axial part, and

20 wherein all cuts are at a single axial position and
21 the remaining second axial part of the nut is
22 substantially solid outside the female threaded portion.

1 Claim 11 (currently amended): A nut having an internal
2 female thread, a first opening from which a male thread
3 to be screwed is inserted, and a second opening, from
4 which the inserted male thread gets out; wherein the nut
5 comprises at least a pair of slits formed at the same
6 position in the axial direction of the nut body and

7 formed at an axial position closer to the second opening
8 and such as to be symmetrical with respect to the axis of
9 the nut and to radially partly penetrate the female
10 thread from the outer periphery of the nut, a first axial
11 part defined on the first opening side and a second axial
12 part defined on the second opening bounded by the pair of
13 slits, and the female thread parts of the first and
14 second axial parts have the same shape parameter, the
15 second axial part being plastically deformed to increase
16 the width of the slits toward the axis of the nut; and
17 the maximum outer diameter of the second axial part is
18 set to be smaller than the minimum outer diameter of the
19 first axial part, and
20 wherein all cuts are at a single axial position and
21 the remaining second axial part of the nut is
22 substantially solid outside the female threaded portion.

1 Claim 12 (previously presented): The nut according to
2 claim 7, wherein the outer periphery of the second axial
3 part is circular in shape.

1 Claim 13 (previously presented): The nut according to
2 claim 7, wherein the first and second axial part have
3 substantially the same shape.

1 Claim 14 (previously presented): The nut according to
2 claim 7, wherein the female thread part formation surface
3 direction of the second axial part is set to be outward
4 from the axis of the nut.

1 Claim 15 (previously presented): The nut according to
2 claim 7, wherein the at least two pairs of slits are

3 formed at predetermined positions uniformly subtending
4 the circumference.

1 Claim 16 (previously presented): The nut according to
2 claim 7, wherein the maximum outer diameter of the second
3 axial part is smaller than the minimum outer diameter of
4 the first axial part.

Claim 17-18 (canceled)

1 Claim 19 (currently amended): A polygon shaped
2 loosening-proof nut comprising a nut body having a
3 central female thread with a nominal diameter d, the nut
4 body also having more than two slits formed such as to be
5 symmetrical with respect to the axis of the nut, the more
6 than two slits radially penetrate the female thread from
7 the outer periphery of the nut and are located on an
8 upper side of an axial center position of the nut body,
9 the slits defining push parts, which have been bent
10 downward resulting in plastic deformation ~~The loosening-~~
11 ~~proof nut according to claim 1,~~ wherein the more than two
12 slits comprise multiple pairs of slits, and
13 wherein each slit of said more than two slits has
14 two endpoints on the outer periphery of the nut, and
15 wherein each of said endpoints is at the same axial
16 position.

1 Claim 20 (previously presented): The loosening-proof nut
2 according to claim 19, wherein the multiple pairs of
3 slits are located at an axial position on the upper side
4 of the axial center position of the nut body.

1 Claim 21 (previously presented): A loosening-proof nut
2 according to claim 2, wherein a distance b between the
3 bottoms of the first and second slit is in a range of
4 0.15 to 0.8 times the nominal diameter d.

1 Claim 22 (previously presented): The loosening-proof nut
2 according to claim 2, wherein the lower portion of the
3 nut body is one of a hexagon and square shape are viewed
4 from above.

1 Claim 23 (previously presented): The loosening-proof nut
2 according to claim 2, wherein the lower portion of the
3 nut body is formed to accept a tool used for tightening
4 and loosening the nut.

1 Claim 24 (previously presented): The loosening proof nut
2 according to claim 5, wherein the angle is slanted and
3 wherein the angle and slant direction are selected to
4 adjust reaction forces of the first and second push
5 parts.

Claim 25 (canceled)

1 Claim 26 (previously presented): The loosening proof nut
2 according to claim 4, wherein said plastic deformation
3 and said difference in gap width s and g result in
4 asymmetric retaining tension levels of the locking
5 feature depending upon nut rotation direction.